Heredity



Practice

Using the steps from the Fun with Punnett Squares Page do some Punnett squares on your own. Grab your paper and a pencil. For each problem, be sure to do the work for each step and don't forget the genotypes and phenotypes of the offspring. We'll get you started with the first problem.

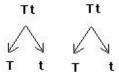
Problem #1 - Use a Punnett square to predict the genotypic and phenotypic outcome (offspring) of a cross between two heterozygous/hybrid tall (Tt) pea plants.

Step 1 - Designate letters which will represent the genes/traits. T = tall t = short (and they do not always have to be the letter T!)

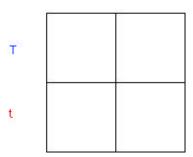
Step 2 - Write down the genotypes of each parent. It is helpful if you write the phenotype in parenthesis under the genotypes. **Tt** X **Tt**

(tall) (tall)

Step 3 - List the genes that each parent can contribute.



Step 4 - Write the possible gene(s) of one parent across the top and the gene(s) of the other parent along the side of the Punnett square.



*Now you're on your own to finish Steps 4 through 6. We should have given you a good start!

Problem #2 - In pea plants, yellow peas are dominant over green peas.

Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between a plant heterozygous/hybrid for yellow (Yy) peas and a plant homozygous/purebred for green (yy) peas.

Problem #3 - In pea plants, yellow peas are dominant over green peas.

Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between two plants heterozygous for yellow peas.

Problem #4 - In pea plants, round peas are dominant over wrinkled peas.

Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between a plant homozygous for round peas (RR) and a plant homozygous for wrinkled peas (rr).

Problem #5 - In pea plants, round peas are dominant over wrinkled peas.

Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between two plants heterozygous for round peas.







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